



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/585,392

07/06/2006

Andreas Dierdorf

2004DE301

2996

25255

7590

04/08/2009

CLARIANT CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
4000 MONROE ROAD
CHARLOTTE, NC 28205

EXAMINER

SCHIRO, RYAN RAYMOND

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

04/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/585,392

Applicant(s)

DIERDORF ET AL.

Examiner

RYAN SCHIRO

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
- Paper No(s)/Mail Date 02/12/2007 and 02/20/2007
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-20 are pending and presented for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-12, 14, 16, 17 and 19-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Suzuki et al. (WO 2003/097760, of which the effective translation used is US 2005/0119402).

1. Suzuki teaches a solution to be used as a hydrophilicity maintaining and promoting agent for a polysilazane coating film (abstract). The hydrophilicity promoting agent solution contains amphoteric surfactants, such as salts of carboxylic acids, as required by claims 1 and 8 (0065). In example 1 of the invention of Suzuki, a silicon wafer is spin coated with a polysilazane solution then a hydrophilicity promoting agent is applied in the coating film, as required by claims 5 and 19 (0078). Example 1 also teaches that the coating temperature is 22 degrees Celsius, which is within the range required by claim 14, and the coating thickness of the dried coating is 0.1 to 2 micrometers, which is within the thickness range required by claim 12 (0078, 0042). The polysilazane coating can be applied to surfaces of vehicles, plumbing system products, metal, plastic or glass, among other embodiments, as required by claims 11, 17 and 20 (0042). A catalyst can be included in the solution of Suzuki, as required by claim 7 (0037). Not to have a smell is an important requirement for the solvent used in the polysilazane coating of

Sukuki (0041). A stable solvent with no generation of gas such as silane, hydrogen or ammonia is preferred, which could be considered inert solvents, and the list of solvents that may be used by Suzuki includes only organic solvents, as required by claim 7 (0038). Water is the preferred solvent for the hydrophilizing solution, as required by claim 10 (0069). Suzuki teaches a perhydropolysilazane solution with a number average molecular weight in the range from 600-3000, as required by claim 2, 3 and 6 (0031).

2. It is inherent that the coating taught by Suzuki would have the hydrophilicity of its surface increased with exposure to UV light because Suzuki essentially teaches the same compositions of polysilazane coating and hydrophilicity coating. Therefore claims 4 and 9 are rejected.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 13, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al.
6. Suzuki does not teach that the ionic hydrophilizing reagent is particularly a salt of a hydroxycarboxylic acid, as required by claims 15 and 18, or using a primer, as required by claim 13.
7. It would have been obvious to a person ordinarily skilled in the art at the time of the invention to use a hydroxycarboxylic acid, instead of the betaine carboxylic acid salts taught by Suzuki. One would have been motivated to make this substitution because Suzuki teaches antiseptics, such as benzoate, and it is well known that some hydroxycarboxylic acid salts which can be derived from benzoates, such as mandelic acid, can be used as antiseptics. Also, mandelic acid is very similar in structure to benzoate and it would be obvious to modify benzoate to give mandelic acid or some other hydroxycarboxylic acid because the compound could serve a dual purpose in the composition, replacing the betaine and benzoate compounds.
8. It would have been obvious to use a primer coating before the polysilazane coating, as required by claim 13. One would have been motivated to do this because it is well known in the

art that applying a primer before a coating will provide for a smoother surface and block the color of the substrate from showing through the coating.

Conclusion

Claims 1-20 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Schiro whose telephone number is 571-270-5345. The examiner can normally be reached on Monday-Friday from 8:30 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached at 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan Schiro
Art unit 1792

/Michael Barr/

Supervisory Patent Examiner, Art Unit 1792